KOMATSU

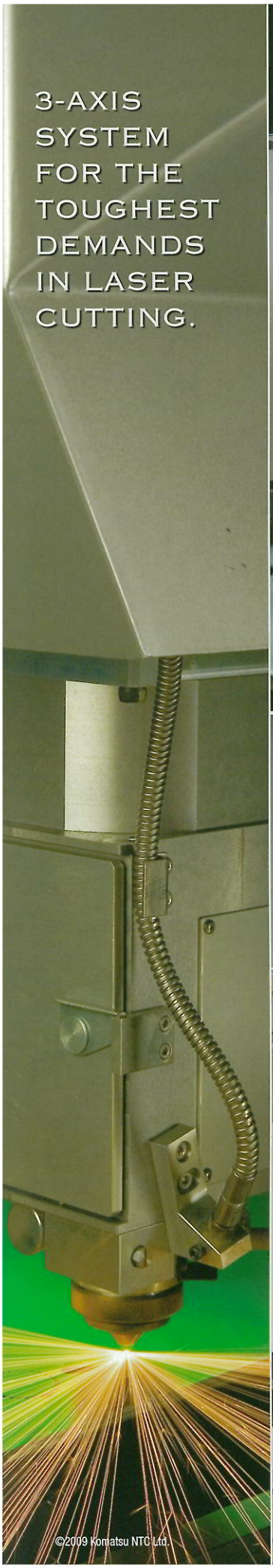
LASER CUTTING SYSTEMS

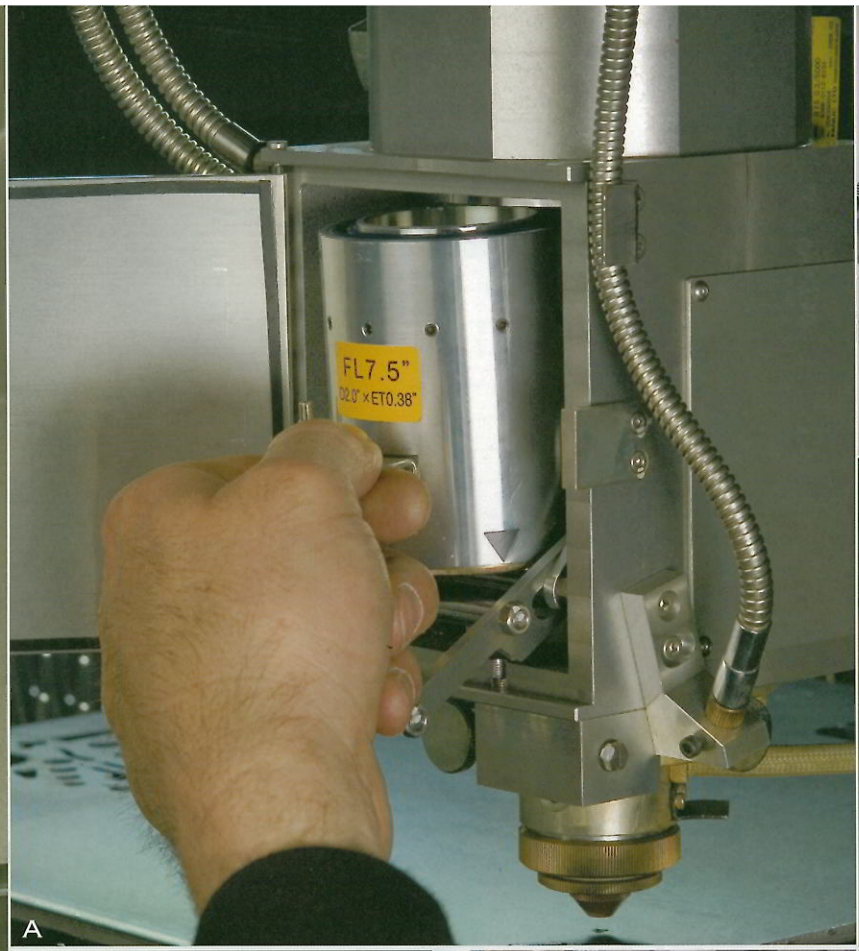
TLV

3-AXIS, 2-DIMENSIONAL
HYBRID
CO_2 LASER CUTTING SYSTEM

NTC Komatsu NTC Ltd.

3-AXIS SYSTEM FOR THE TOUGHEST DEMANDS IN LASER CUTTING.





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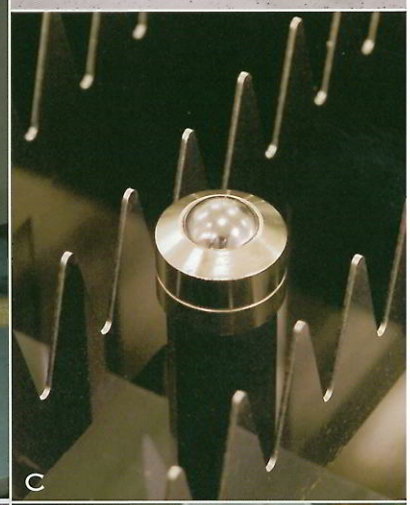
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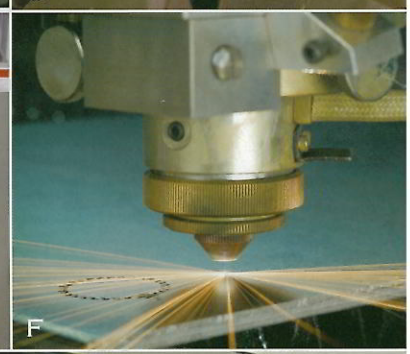
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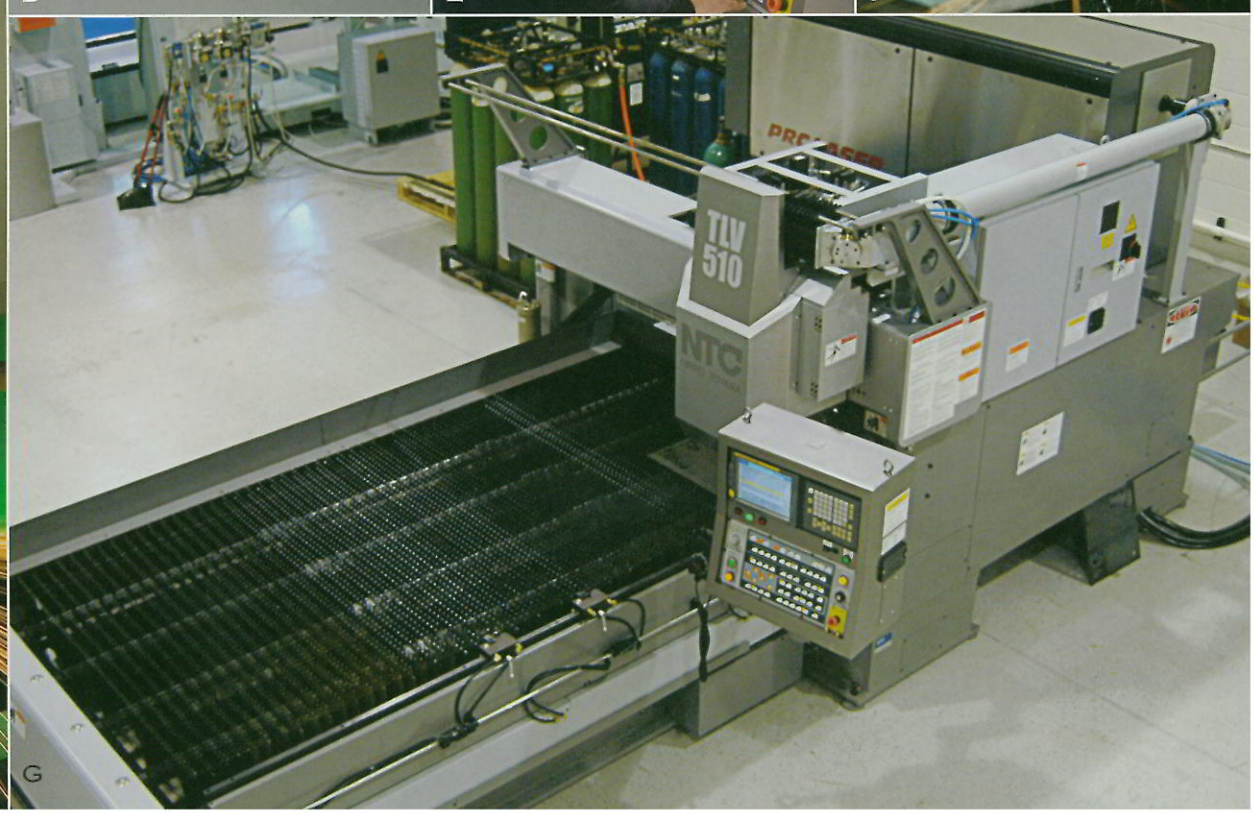

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A *Quick-change lens assembly for added flexibility in cutting applications.*

B *Wider scrap-handling conveyor design that eliminates jamming.*

C *Power lifter for precise positioning of the work piece.*

D *Intricate cutting patterns are made easy with the TLV Series.*

E *Fanuc controller and NTC-developed cutting software for all functions and process parameters.*

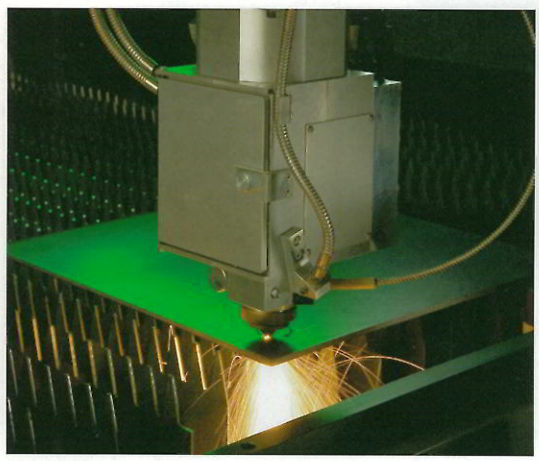
F *Able to withstand severe environments, but flexible enough to cut complex shapes and contours.*

G *Six models with work envelopes to 246 in. x 86 in. (6,250mm x 2,200mm).*

THE TOUGHEST DEMANDS IN LASER CUTTING SUCH AS THICK PLATE, HEAVY WORKLOADS OR LONG AND WIDE STOCK ARE NO OBSTACLE FOR THE TLV SERIES 2-DIMENSIONAL, 3-AXIS CO_2 LASER CUTTING SYSTEMS.

TOUGH

The TLV Series is at the forefront in powerful laser cutting systems. The bridge-style laser cutting system bundles all of the performance and operation features into tough, rugged systems ideal for flexible fabricating applications or high-volume production. There's power for deep penetration-piercing and agility to corner around tight curves. The TLV is able to withstand severe environments, but flexible enough to make the complex simple and the intricate routine.



POWERFUL

The TLV series offers a degree of laser cutting productivity that few systems can achieve. The Series' four power options encompass a full range of laser versatility up to 6kW all utilizing dependable fast axial flow, DC excitation for consistent, targeted power output. A rapid feed rate of up to 1,181 in. (30,000mm) per minute and cutting speeds of up to 787 in. (20,000mm) per minute mean less downtime and more time cutting parts.

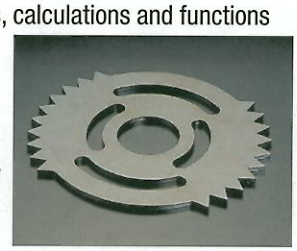
Six models provide working envelopes up to 246 in. x 86 in. (6,250mm x 2,200mm), yet all feature a unique configuration that makes the TLV design more compact than conventional systems. The TLV systems also feature drives consisting of AC servomotors, ball screw and linear ball guide mechanisms.

The TLV series offers a fast-response gap sensor to monitor optics-to-material distances that compensate for varying material thickness and surface irregularities assuring total penetration. To maximize loading and unloading efficiency, automatic stock clamping and a work lift ball transfer mechanism are standard features. Other features include a wider scrap-handling conveyor design that eliminates jamming and a centralized lubrication system that lowers maintenance requirements. All this plus a floor saving layout makes integration into existing manufacturing systems and cells easy.

PRECISE

The TLV series has the accuracy typically found only on much smaller machines handling much smaller workloads. For the TLV, that translates into a positioning accuracy as close as ±0.0005 in. (0.02mm) per 12 in. (300mm) of movement.

Add a Fanuc controller and NTC-developed laser cutting software, and all the system elements become one. This process synchronizes movements of all three axes for smooth cutting action in all part geometries and shapes. The interactive software provides for subroutines, calculations and functions for circle, arc and linear interpolation; mirror imaging, cutting parameters library; scaling; automatic skew compensation and part program storage.

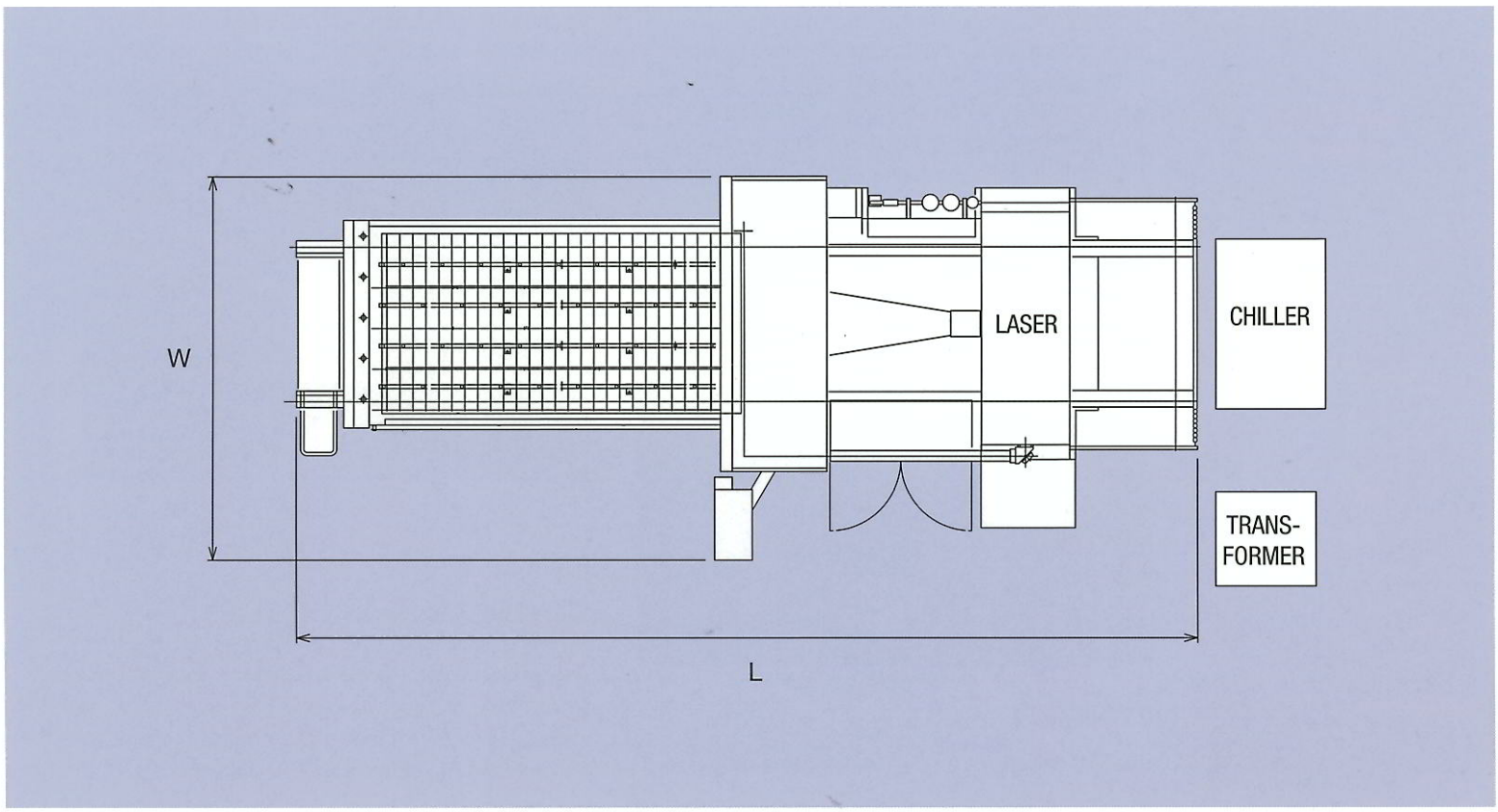


The TLV Series is made more versatile than ever with a broad range of options and auxiliary equipment such as workpiece storage loaders, workholding fixtures, and advanced programming options that help you achieve maximum productivity.

The TLV Series provides the toughness and accuracy for the most demanding laser cutting applications.

TLV series machine specifications

Item	Model	TLV-404	TLV-408	TLV-510	TLV-714	TLV-720
Working stroke	mm(inch)	1,300x1,250 (51x49)	2,500x1,250 (98x49)	3,100x1,600 (122x62)	4,300x2,200 (169x86)	6,250x2,200 (246x86)
X axis travel	mm(inch)	1,300 (51)	2,500 (98)	3,100 (122)	4,300 (169)	6,250 (246)
Y axis travel	mm(inch)	1,250 (49)		1,600 (62)	2,200 (86)	
Z axis travel	mm(inch)	300 (12)				
Rapid feed rate	X,Y axis mm/min.(inch)/min.	30,000 (1,181)				
	Z axis mm/min.(inch)/min.	20,000 (787)				
Cutting feed rate	X,Y axis mm/min.(inch)/min.	MAX 20,000 (787)			MAX 15,000 (590)	
Floor space	WxL mm(inch)	3,060x5,050 (120x199)	3,060x6,255 (120x246)	3,470x6,805 (136x268)	4,380x9,750 (172x383)	4,380x13,830 (172x544)



Komatsu NTC Ltd.

www.ntclaser.com

NTC America Corporation
46605 Magellan Drive, Novi, MI 48377, U.S.A.
Phone: 800-NTC-LASR Fax: 248-560-0215

Head Office
641 Nojiri, Nanto City, Toyama 939-1595, JAPAN
Phone: 81-763-22-1254 Fax: 81-763-22-1256

Nippei Toyama Europe GmbH.
Eisenstrasse 3,65428 Ruesselsheim, GERMANY
Phone: 49-6142-796600 Fax: 49-6142-820610

Nippei Toyama India Private Limited
Plot No. A-64, H-Block Midc Pimpri, Pune-411 018, INDIA
Phone: 91-20-2748-0587 Fax: 91-20-2748-0588

Nippei Toyama Shanghai Trading Co., Ltd
Room No. 1105 Tomson Financial Building 710, Dongfang Road, Pudong, Shanghai, CHINA
Phone: 86-21-5830-3721 Fax: 86-21-5830-3723

Beijing Office
D 809 Room, Yong He Plaza, East An Ding Meng Avenue 28, Beijing 100007, CHINA
Phone: 86-10-8419-5197 Fax: 86-10-8419-5199

Guangzhou Office
Room 903A, Ren Feng Plaza, 490 Tian He Road, Tian He Area, Guangzhou 510620, CHINA
Phone: 86-20-3888-8571 Fax: 86-20-3888-8572

Specifications are subject to change without notice for improvement.

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